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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,718	10/27/2005	Patrick Kromotis	5367-165PUS	9142

27799 7590 04/25/2007
COHEN, PONTANI, LIEBERMAN & PAVANE
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EXAMINER

INGHAM, JOHN C

ART UNIT PAPER NUMBER

2814

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/529,718

Applicant(s)

KROMOTIS ET AL.

Examiner

John C. Ingham

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendments to the claims filed 29 January 2007 have been entered and the objections to claims 3 and 5 have been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata (US 4,935,665), JP2001085748 from the IDS filed on 30 March 2005, hereinafter AAPA, and further in view of Joshi (US 2003/0122247). The AAPA translation was previously made of record in the Action of September 2006.

5. Regarding claims 1, 4, and 6, Murata discloses in Fig 7 a light source module having a plurality of LEDs (two shown) connected to a metal carrier (12) of aluminum or copper (col 3 ln 33) in an insulating manner (via insulating layer 13), the LEDs being surrounded by a frame (Fig 7 item 4), and potting composition (col 4 ln 12) arranged between the frame and the LEDs. Murata fails to specify that the frame has expansion joints.

The AAPA discloses in Fig 2A a light source module having a plurality of LEDs wherein the LEDs are surrounded by a frame (8) of plastic (¶19) and the frame has expansion joints (9) of thinned plastic in order to ease the stress of thermal expansion (¶ 04). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of AAPA in the module of Murata in order to ease thermal expansion stress. Murata and AAPA do not specify that a separating cut is provided in the expansion joints.

Joshi discloses in Fig 3A a multi-chip package having troughs etched completely through the frame to create expansion joints and ease stress (¶ 27). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Joshi in the module of Murata and AAPA in order to ease stress.

6. Regarding claims 2, 3, and 7, AAPA discloses in Fig 2B the module of claim 1 wherein the frame (8) is segmented into a plurality of frame parts by expansion joints (9), wherein one cutout (circular region 6) for receiving LEDs is provided per each of the frame parts, and wherein the LEDs are arranged in a grid.

7. Regarding claim 5, AAPA discloses in Fig 2A the module of claim 1 wherein the frame (item 7) is adhesively bonded at the underside towards the printed circuit board (item 5, formed by a PCB, ¶19).

8. Claims 1, 2, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata and Huang (US 6,545,332). Murata discloses in Fig 7 a light source module having a plurality of LEDs (two shown) connected to a metal carrier (12) of aluminum or copper (col 3 ln 33) in an insulating manner (via insulating layer 13), the LEDs being surrounded by a frame (4), and potting composition (col 4 ln 12) arranged between the frame and the LEDs. Murata fails to specify that the frame has expansion joints, wherein a separating cut is provided in the expansion joints.

Huang teaches in Fig 9 and 10 a frame that is segmented into a plurality of frame parts by expansion joints, has separating cuts, and teaches the method of separating optical package units by a sawing method so that the modules can simultaneously undergo a molding process and increase productivity (col 6 ln 37-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Huang in the method of Murata in order to increase productivity and simultaneously process and separate the frame parts.

Response to Arguments

9. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okazaki (US 6,653,661) Fig 4 discloses a similar arrangement of separating cuts through a frame of an LED array, and Lim (US 5,773,878) Fig 1 discloses a slot through a leadframe to help with thermal expansion.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

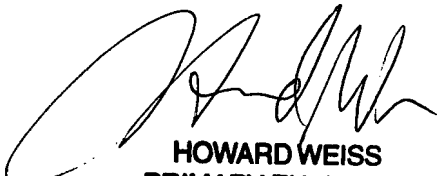
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Ingham whose telephone number is (571) 272-8793. The examiner can normally be reached on M-F, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John C Ingham
Examiner
Art Unit 2814

jci



HOWARD WEISS
PRIMARY EXAMINER